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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,140	07/09/2003	Daniel J. Turk	3994994-144415	2080
23570 7590 01/05/2007 PORTER WRIGHT MORRIS & ARTHUR, LLP INTELLECTUAL PROPERTY GROUP 41 SOUTH HIGH STREET 28TH FLOOR COLUMBUS, OH 43215			EXAMINER CHUNG, EUN HEE	
			ART UNIT 2123	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			01/05/2007	
			DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/616,140

Applicant(s)

TURK ET AL.

Examiner

Eun H. Chung

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/25/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5 and 7-20 is/are rejected.
- 7) ☒ Claim(s) 7, 8, and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 10/25/2006 has been received and considered. Claims 2-4 and 7-20 are presented for examination.

Claim Objections

2. Claims 7, 8, and 10 are objected to because of the following informalities:

As per claims 7 and 8, the phrase "so built" in line 17 (Claim 7) and line 16 (Claim 8) would be better as "as built".

As per claim 10, the phrase "the library data file" in line 1 would be better as "the library data files" to avoid any possible antecedent issues.

As per claim 10, the phrase "parts selected to be conjoined" in line 2, would be better as "selected parts to be conjoined".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 9, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 4, the word "approximately" and "points" in line 3 render the claim indefinite because it is unclear what the limitations refer.

As per claim 9, the phrase "ultimately" in line 2 and "approved for commercial release" in line 3 render the claim indefinite because it is unclear what the limitations refer.

As per claim 14, the word "improvement" in line 3 renders the claim indefinite because it is unclear what the limitation refers.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2123

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 2-5 and 7-14, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faruque et al. (U.S. Pub. No 2003/0149500), in view of Heile et al. (U.S. Patent No 6,298,319).

As per claims 7 and 8, Faruque et al. teaches (Claims 7 and 8) a white body modeling system integrating information from disparate sources involved in a process involving a task group associated with a mechanical assembly comprising (Abstract, Fig. 1, Paragraph [0027]):

a library comprising data files that record in a format corresponding to one or more lists comprising: 1) parts and the characteristics of the parts retrievable from a work station in the task group upon the selection of a part (Fig. 1-4, Paragraph [0011]-[0013], [0021], [0030]-[0034]); and 2) welds and characteristics of welds, retrievable from a work station in the task group upon the selection of a weld (Fig. 1-4, Paragraph [0011]-[0013], [0021], [0030]-[0034]);

a network linking the library data files to work stations of task group members involved with a mechanical assembly (Fig. 1, paragraph [0011] and [0020]);

work stations associated with the task group members for 1) 1) selecting a plurality of parts from the one or more than one parts list in the library (Fig. 1-4, Paragraph [0012], [0020], [0026], [0029]-[0038], and [0041]);

2) extracting the data files from the library associated with the parts selected; (Fig. 1-4E, Paragraph [0012], [0024], [0029]-[0038], and [0041]);

3) associating the selected parts and their data files in an assembly in which the selected parts are to be conjoined (Fig. 1-4E, Paragraph [0012], [0024], [0026], [0029]-[0038], and [0041]);

4) processing the selected parts through a mesh process (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0038], and [0041]);

5) saving the assembly mesh data in a database (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0039], and [0041]);

6) selecting a weld and the characteristics of the weld to be utilized to conjoin selected parts in an assembly (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0039], and [0041]);

7) building the assembly by associating mesh data with weld data (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0039], and [0041]);

8) translating the assembly so built into a virtual simulation format data record (Fig. 1-4E, Paragraph [0012], [0025], [0026], [0029]-[0051]);

9) performing a virtual simulation of the assembly (Paragraph [0029]-[0051]);

10) recording the characteristics of the assembly in the simulation (Fig. 1-4E, Paragraph [0029]-[0042]); and

11) the assembly and the characteristics of the assembly simulation to the library such that records of the assembly and the characteristics of assembly simulation become available as a data file record of a part for retrieval in the library (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0042]); and

(Claim 8) a continuous loop in the library for maintaining of the characteristics of the assembly after a simulation of the assembly such that the assembly, the characteristics of the assembly and the characteristics of the assembly simulation of the assembly become available for retrieval from the library as a selectable part (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0042]);

Faruque et al. fails to teach (Claim 7 and 8) returning a record and a feedback record.

Heile et al. teaches (Claim 7 and 8) returning a record and a feedback record (Fig. 15 element 720, Col. 3 lines 5-40, Col. 19 lines 45-69).

Faruque et al. and Heile et al. are analogous art because they are both related to a method of a design system.

Therefore, it would have been obvious to one of ordinary skill in the art of at the time the invention was made to include the teachings of Heile et al., in the method of interactively assembling a model of Faruque et al. because returning a feedback record to list in the database is a well known process for a ordinary skilled artisan in a method of interactively assembling a model. Heile et al. teaches an improved designing system that allows multiple engineers to work efficiently on a complex design (Col. 3 lines 19-36).

As per claim 2, Faruque et al. teaches refining the assembly in view of the simulation and updating the data associated with the refined assembly and a list in the library (Paragraph [0022], [0024], [0039]-[0040]);

Faruque et al. fails to teach the record is returned to a list.

Heile et al. teaches the record is returned to a list (Fig. 15 element 720, Col. 3 lines 5-40, Col. 19 lines 45-69).

It would have been obvious to one of ordinary skill in the art of at the time the invention was made to include the teachings of Heile et al., in the method of interactively assembling a model of Faruque et al. because returning a feedback record to list in the database is a well known process for a ordinary skilled artisan in a method of interactively assembling a model. Heile et al. teaches an improved designing system that allows multiple engineers to work efficiently on a complex design (Col. 3 lines 19-36).

As per claim 3, Faruque et al. teaches association of properties of the type of material from which a part is formed (Fig. 1-4E, Paragraph [0041]-[0045]);

As per claim 4, Faruque et al. teaches the number of mesh elements recorded (Paragraph [0040]), except teaching a part of ranges from approximately 100 points to approximately 100,000 or more points.

It was known at the time the invention was made that the number of mesh elements recorded to simulated a part of multiple ranges from approximately 100 points to approximately 100,000 or more points for system of interactively assembling a model. At the time the invention was made, it would have been obvious to one of ordinary skill in the art of technology of modeling and virtual evaluation system for mechanical assemblies to include the number of mesh elements recorded to simulate a part of ranges from approximately 100 points to approximately 100,000 or more points.

The motivation would have been to ensure the quality and consistency of the assembled mesh model, which results in improved the analysis (Paragraph [0035]).

Therefore it would have been obvious to modify Faruque et al. to obtain the invention as specified in claim 4.

As per claims 5 and 12, Faruque et al. teaches simulation conducted with respect to one or more than one of crash impact, durability and noise (Fig. 1-4E, Paragraph [0021], [0025], [0033]).

As per claim 9, Faruque et al. teaches the continuous loop ultimately results in a tested and refined assembly approved for commercial release (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0042]).

As per claim 10, Faruque et al. teaches wherein the library data file for a part includes tags for connection locations between parts selected to be conjoined in an assembly (Fig. 1-4E, Paragraph [0041]-[0045]).

As per claim 11, Faruque et al. fails to teach an actively updated interactive database within the library commonly accessible by work stations associated with members of the task group from the beginning of a design process to the end of a design process.

Heile et al. teaches an actively updated interactive database within the library commonly accessible by work stations associated with members of the task group from the beginning of a design process to the end of a design process (Fig. 15 element 720, Col. 3 lines 5-40, Col. 19 lines 45-69).

It would have been obvious to one of ordinary skill in the art of at the time the invention was made to include the teachings of Heile et al., in the method of interactively assembling a model of Faruque et al. because an actively updated interactive database is a well known process for a ordinary skilled artisan in a method of interactively assembling a model. Heile et al. teaches an improved designing system that allows multiple engineers to work efficiently on a complex design (Col. 3 lines 19-36).

As per claim 13, Faruque et al. teaches that in the process of building the assembly by associating mesh data with weld data relating to the manner in which conjoined parts are welded in the assembly, imperfections in the mesh are identified and fixed (Fig. 1-4E, Paragraph [0012], [0023], [0026], [0029]-[0042]).

As per claim 14, Faruque et al. teaches the each modification made in any stage of building and evaluating an assembly is recorded and is separately selectable as a discrete step in a continuum of testing and improvement in a design cycle

As per claims 17 and 20, Faruque et al. teaches the task group is associated with a motor vehicle assembly (Paragraph [0034]).

Art Unit: 2123

10. Claim 15-16 and 18-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faruque et al. (U.S. Pub. No 2003/0149500), in view of Heile et al. (U.S. Patent No 6,298,319), and further in view of Hazama et al. (U.S. Patent No. 6,212,441).

Faruque et al. as modified by Heile et al. teaches most all of the instant invention as applied to claims 2-5 and 7-14, 17, and 20 above.

Faruque et al. as modified by Heile et al. teaches a simulation work station(Fig. 1).

Faruque et al. as modified by Heile et al. fails to teach more than one of a design work station and an assembly work station.

Hazama et al. teaches more than one of a design work station and an assembly work station (Fig. 1).

Faruque et al. as modified by Heile et al. and Hazama et al. are analogous art because they are both related to a method of a design system.

Therefore, it would have been obvious to one of ordinary skill in the art of at the time the invention was made to include work stations of Hazama et al., in the method of interactively assembling a model of Faruque et al. as modified by Heile et al. because the assembly workstation is a well known process for a ordinary skilled artisan in a method of interactively assembling a model. Hazama et al. teaches an advantageous system that provides central stored the design and the job so they can be easily accessed and retrieved from any area in the factory (Col. 4 lines 9-35).

Response to Arguments

11. Applicant's arguments filed 10/25/2006 have been fully considered but they are not persuasive.

Applicant's arguments with respect to Claims 2-5 and 7-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

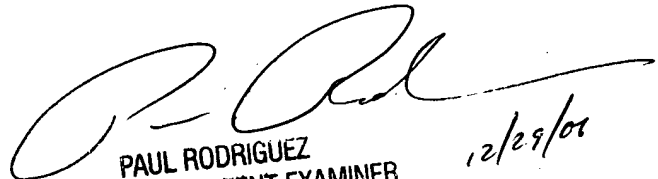
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eun H. Chung whose telephone number is 571-272-2164. The examiner can normally be reached on 7:30am-4:00pm Monday to Friday.

Art Unit: 2123

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EHC


PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
12/29/01